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REMARKS

Claims 1-69 were pending in this application, with claim 70 having previously been canceled, without prejudice or disclaimer. By this Amendment, claims 46 and 58 have been amended to clarify, without narrowing a scope of, the claimed subject matter, and new claim 71 has been added. Accordingly, claims 1-69 and 71 are now pending, with claims 1, 23, 46 and 58 being in independent form.

Claims 46-69 were rejected under 35 U.S.C. §101 as purportedly directed to non-statutory subject matter.

By this Amendment, claims 46 and 58 have been amended to clarify, without narrowing a scope of, the claimed subject matter. More specifically, claims 46 and 58 clearly point out that a graphical drawing output is generated by the image forming apparatus by executing the valid other graphical drawing instructions and not executing the invalid graphical drawing instruction, to reduce a number of operations performed by the image formation apparatus, if it is determined that the drawing process corresponding to the invalid graphical drawing instruction can be omitted by the image formation. Applicant maintains that since a graphical drawing output is generated with a reduced number of operations by the image formation apparatus, a concrete, useful and tangible result is obtained.

Accordingly, withdrawal of the rejection under 35 U.S.C. §101 is requested.

Claims 1-14, 17-22, 46-52, 55-64 and 67-69 were rejected under 35 U.S.C. §103(a) as purportedly unpatentable over U.S. Patent 6,456,298 to Kunimasa et al. in view of Kato (US 2002/0132665 A1). Claims 15, 16, 23-45, 53, 54, 65 and 66 are rejected under 35 U.S.C. §103(a) as purportedly unpatentable over Kunimasa in view of Kato and further in view of U.S. Patent No. 6,100,998 to Nagao et al.

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Applicant has carefully considered the Office Action and the cited art, and respectfully submits that independent claims 1, 23, 46 and 58 are patentable over the cited art, for at least the following reasons.

The present application relates to an approach for improving efficiency and conserving resources in a graphical drawing process, by rendering invalid one or more instructions that can be omitted (for example, if they are redundant or unnecessary) to reduce a number of operations performed by an image formation apparatus. Each of independent claims 1, 23, 46 and 58 of the present application addresses these features, as well as additional features.

Kunimasa, as understood by applicant, proposes an image drawing approach for generating an output on a printer, wherein when a drawing instruction including a drawing logical arithmetic process instruction is input, such drawing instruction is converted to a drawing object and the drawing logical arithmetic process instruction, and it is determined whether the drawing logical arithmetic process instruction has content to be drawn without logical arithmetic process or not. When the drawing logical arithmetic process instruction is determined to have content to be processed without logical arithmetic process, the drawing object converting unit converts the drawing logical arithmetic process instruction and drawing object to another instruction and drawing object which do not require the drawing logical arithmetic process. The drawing process based on the other instruction is performed.

Kunimasa, as acknowledged in the Office Action, does not teach or suggest making a graphical drawing instruction invalid if it is determined that a drawing process corresponding to the graphical drawing instruction can be omitted, and not performing the drawing process corresponding to the invalid graphical drawing instruction.

Kato, as understood by applicant, proposes an approach for generating an object and an

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aiming mark on a display, in a video game. When a user moves the aiming mark, using a pointing device operated by the user, to the neighborhood of the targeted object (that is, within the "target area" or "hit box"), the game machine automatically draws the user's aiming mark on that object. However, when the user continues to move the aiming mark beyond the target area, the machine will stop drawing the aiming mark on the target and go back to drawing the aiming mark where the user is actually pointing.

Kato, [0009], claim 14 and claim 28, which was cited in the Office Action, states as follows:

[0009] The above objects of the present invention are achieved by an image processing apparatus. The apparatus includes an object display unit for displaying an object on a monitor, unit for displaying a pointing mark on the monitor, and unit for moving the position of the pointing mark on the monitor in accordance with a movement instruction output from a controller. The apparatus also includes a determination unit for determining, on the basis of movement of the pointing mark, whether or not the pointing mark is actuated toward the object. The apparatus further includes a drawing unit for drawing the pointing mark to a drawing position which links with the object when the pointing mark is determined to have been actuated toward the object.

...
14. The image processing apparatus according to claim 1, further comprising:
means for selectively rendering the drawing means valid or invalid in accordance with an instruction output from the controller.

...
28. The image processing program according to claim 15, further comprising a program for causing a computer to perform processing for selectively rendering the drawing processing valid or invalid in accordance with an instruction output from the controller.

Accordingly, Kato proposes rendering the drawing processing invalid after the drawing process has commenced, in accordance with an instruction output from a controller when the aiming mark is moved by the user beyond the target area.

Kato does not teach or suggest making a graphical drawing instruction invalid if it is determined based on a drawing attribute that a drawing process corresponding to the graphical drawing instruction can be omitted.

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Kato is not concerned with whether drawing attributes indicate that an instruction can be omitted. Instead, Kato proposes modifying the drawing process based on user input.

In any event, one skilled in the art would not have understood modified the apparatus of Kunimasa based on the proposals of Kato, since Kato involves drawing to a monitor based on user interaction, whereas Kunimasa is directed to generating a drawing with a printer. It is well understood that the output process of a printer is substantially different from that of a display, and therefore one skilled in the art would not have been motivated to utilize proposed features in an approach for generating a video game a display to modify an approach for generating a drawing on a printer.

Nagao, as understood by applicant, proposes a print processor wherein print data is generated in description language from document or text data prepared by application programs, the print data is parsed to generate tokens, the tokens are output to an intermediate data generating unit, and the intermediate data generating unit interprets the received tokens and executes drawing instructions based on interpretation of the tokens.

As previously discussed in the record, Nagao, like Kunimasa and Kato, does not teach or suggest marking a graphical drawing instruction invalid if it is determined based on a drawing attribute that a drawing process corresponding to the graphical drawing instruction can be omitted.

Accordingly, independent claims 1, 23, 46 and 58 are patentably distinct from the cited art.

Applicant respectfully submits that independent claims 1, 23, 46 and 58, and the claims depending therefrom, are patentable over the cited art.

In view of the remarks hereinabove, Applicant submits that the application is now in condition for allowance. Accordingly, Applicant earnestly solicits the allowance of the application.

If a petition for an extension of time is required to make this response timely, this paper

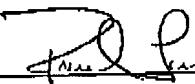
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should be considered to be such a petition. The Office is hereby authorized to charge any fees that may be required in connection with this response and to credit any overpayment to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,



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